TECHNICAL WORK MAY NOT BEGIN PRIOR TO CTR ACCEPTANCE

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.	JOB ORDER NUMBER	APPROP. FY
QSS Group, Inc.	NAS5- 99124 TASK NO. 223 AMENDMENT	563-632-10-11-89	99 and 00

TASK TITLE: (NTE 80 characters; include Project name)

Life Cycle Testing on Li-Ion Cells

APPROVALS: (Type or print name and sign)

	DATE	ORG CODE	MAIL CODE	PHONE
ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR) Gopal Rao	2/28/00	563	563	301-286-6654
Marlon Enciso for Thomas Y.	2/28/00	CODE 563		PHONE 301-286-5845
CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) Robert S. Lebair, Jr.	2/29/00	CODE 560		PHONE 301-286-6588

FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE? (IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK)	CONTRACTING OFFICER'S QUALITY REP.	DESIGNATED FAM:
[X] NO [ ] YES	Larry Moore	

The contractor shall identify and explain the reason for any deviations, exceptions, or conditional assumptions taken with respect to this Task Order or to any of the technical requirements of the Task Order Statement of Work and related specifications. The contractor shall complete and submit the required Reps and Certs.

(To be completed by Contracting Officer)
C.O. Requested Quote on:
Date: MAR - 3 2000

Contractor will develop specification or statement of work under this task for a future procurement. [X] NO [ ] YES

Flight hardware will be shipped to GSFC for testing prior to final delivery. [ ] NO [ ] YES [X] N/A

Government Furnished Property/Facilities: [ ] NO [X] YES – SEE LIST OF GFP (offsite only) / FACILITIES (onsite only)

Onsite Performance: [X] NO [ ] YES If yes: [ ] TOTAL [ ] PARTIAL
If partial, indicate onsite work in SOW by asterisk (*)

Surveillance Plan Attached: [X] NO [ ] YES

Highlighted Contract Clauses: *(to be completed by Contracting Officer)*

The effective of this task is March 23, 2000.

INCENTIVE FEE STRUCTURE (check one)

	___ No. 1	_X_ No. 2	___ No. 3	___ No. 4	___ No. 5
Cost	10%	50%	25%	25%	%
Schedule	15%	25%	25%	50%	%
Technical	75%	25%	50%	25%	%

(To be completed by Contracting Officer)

The target cost of this task order is $ 40,722.

The target fee of this task order is $ 338.

The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is $ 41,060.

The maximum fee is $ 494.

The minimum fee is $0.

AUTHORIZED SIGNATURE:

THIS TASK ASSIGNMENT IS ISSUED ACCORDING TO THE CONTRACT CLAUSE "TASK ASSIGNMENTS AND REPORTS"

Lorrie L. Eakin — SIGNATURE OF CONTRACTING OFFICER

3/23/00 — DATE

Lorrie L. Eakin
Contracting Officer — TYPED NAME OF CONTRACTING OFFICER

CONTRACTOR'S ACCEPTANCE:

AUTHORIZED SIGNATURE _____ DATE _____

TECHNICAL WORK MAY NOT BEGIN PRIOR TO CTR APPROVAL

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.		
	NAS5-	TASK NO.	AMENDMENT
QSS Group, Inc.	99124	223	

Applicable paragraphs from contract Statement of Work: Function 2.D.7

STATEMENT OF WORK: (Continue on blank paper if additional space is required)

The contractor shall provide services to study the lithium-ion cell life cycle performance.

The Lithium-Ion Cells to be tested are: eight (8) 12 Ah from SAFT, eight (8) 20 Ah from YTP, eight (8) 8 Ah from Lithium Technology, eight (8) 1.5 Ah from Wilson Greatbach, and five (5) 3 Ah from ATK Polymer. These cells will be provided by GSFC as GFE items.

The contractor shall provide the following services:

Perform initial acceptance test only on SAFT cells

- Provide cell capacities at 25, 10 and 0 degrees C.
- Perform Charge retention test at 25 degrees C.

After completion of the acceptance testing, the contractor shall present electrical performance data from the initial acceptance test to ATR and /or his representative.

Assemble eight (8) cell series test packs except ATK and YTP packs.
ATK cell pack shall have five (5) cells.
The contractor shall add two (four) and/or delete zero (two) in the existing YTP pack in consultation with the ATR.
Perform about 2500 LEO cycles at 40 percent Depth-of-Discharge and 20 degrees C

- Test orbit shall be 90 minutes: 60 minutes Charge and 30 minutes discharge
- Clamp the voltage during the charge and provide a minimum of 15 minutes trickle charge

The contractor shall notify the ATR of any cell failure within 48 hours of such a failure by email at grao@gsfc.nasa.gov or FAX at (301)286-1751.
The contractor shall prepare a written corrective action plan after such a failure, and submit it to ATR within 72 hours of the failure.
The contractor shall email or fax a typical orbit data weekly to ATR.
The contractor shall submit a written status report after completing 1000 cycles on each test pack.
Upon completion of the cycling test program, the contractor shall submit a written final report to the ATR within 21 days.

PERFORMANCE SPECIFICATIONS:
All plans and testing under this task are to be produced and performed using aerospace test standards and practice.

APPLICABLE DOCUMENTS:
Lithium-Ion Test Plan by Gopal Rao, Code 563, GSFC

TASK END DATE: 8/31/00

MILESTONES/DELIVERABLES AND DATES:

Initial Acceptance Test Data Report	Within 72 hours of the completion of testing
One orbit data	Weekly
Status Report	After one thousand Orbits on each pack
Cell Failure Notification	Within 48 hours of such a failure
Corrective Action Plan	Within 72 hours of the failure
Final Report	Within 21 days of the completion of testing

PERFORMANCE STANDARDS:
Schedule: On-time delivery of the above.
Technical: ATR's acceptance of the above.

FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):
Gopal Rao, Code 563, B-20, Room 166